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FIG. 9 does not contain a substrate sub-layer 125, because the planarizing material sub-layers 121a–121b and high-density sub-layers 122a–122b have been deposited directly over the OLED region 116, eliminating the need for a separate substrate sub-layer. Finally, a top layer 150 is attached to the remainder of the structure via adhesive layer 130. Top layer 150 can be provided with a number of desirable properties, including barrier properties, scratch resistance, antireflective properties, circular polarizing properties and so forth. Hence, in the embodiment illustrated in FIG. 9, the adhesive region 130 is disposed between one region containing a top layer 150 and another region containing substrate layer 110, OLED region 116 and barrier layer 120. This is in contrast with the embodiments of FIGS. 3–6, in which the adhesive layer 130 adheres one region containing a substrate layer 110 and an OLED region 116 to another region containing a barrier layer 120.

One example of a web-based scheme for attaching a top layer 150 to an OLED containing region 214 (containing a substrate layer, an OLED region, and a barrier layer, for example) is illustrated in FIG. 10. As seen in this figure, the top layer 150 and an adhesive containing layer 135 (which includes an adhesive layer and an adjacent release layer in this example) are fed through heated rollers 200a to soften the adhesive and prevent bubbles from persisting between the top layer 150 and the adhesive layer. After emerging from the rollers 200a, the release layer 132 is removed. The resulting adhesive top region 240 (which consists of top layer 150 layer with adjacent adhesive layer in this embodiment) is then fed, along with the OLED containing region 214, through heated rollers 200b to again facilitate bubble removal. After emerging from the rollers 200b, the resulting OLED structure 110 is exposed to ultraviolet light to cure the adhesive layer. The positions of the top layer 150 and the OLED containing region 214 in FIG. 10 can be reversed, if desired the fabrication of the OLED structure 110. Moreover, a process analogous to the process of FIG. 8 can also be used to fabricate the OLED structure 110.

Although the present invention has been described with respect to several exemplary embodiments, there are many other variations of the above-described embodiments that will be apparent to those of ordinary skill in the art. It is understood that these variations are within the teachings of the present invention, and that the invention is to be limited only by the claims appended hereto.

What is claimed is:

1. An organic electronic device structure comprising:
 - a substrate layer;
 - an organic electronic region disposed over the substrate layer;
 - a pressure sensitive adhesive layer disposed over the substrate layer and over the organic electronic region;
 - a barrier layer disposed over the adhesive layer; and
 - a protective layer between said organic electronic region and said adhesive layer,
 wherein said organic electronic device structure is a flexible organic electronic device structure.
2. The organic electronic device structure of claim 1, wherein said organic electronic region is an OLED region.
3. The organic electronic device structure of claim 2, wherein said adhesive layer is a low-temperature-curable adhesive layer.
4. The organic electronic device structure of claim 2, wherein said adhesive layer is a radiation-curable adhesive layer.
5. The organic electronic device structure of claim 2, wherein said adhesive layer is an ultraviolet-radiation-curable adhesive layer.

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6. The organic electronic device structure of claim 2, wherein said adhesive layer displays low out-gassing of harmful species.

7. The organic electronic device structure of claim 2, wherein said adhesive layer is in the form a continuous layer that is disposed over the entire OLED region.

8. The organic electronic device structure of claim 2, wherein said adhesive layer is in the form of a ring that is disposed over only a portion of the OLED region.

9. The organic electronic device structure of claim 2, further comprising a getter material.

10. The organic electronic device structure of claim 9, wherein the getter material is provided in said adhesive layer.

11. The organic electronic device structure of claim 2, wherein said substrate layer is selected from a metal layer, a semiconductor layer, a glass layer, a ceramic layer, a polymer layer and a composite material layer.

12. The organic electronic device structure of claim 2, wherein said substrate layer is a composite material layer that comprises (a) a polymer substrate sub-layer and (b) at least two alternating pairs of high-density sub-layers and planarizing sub-layers, which high-density sub-layers may be the same or different from each other and which planarizing sub-layers may be the same or different from each other.

13. The organic electronic device structure of claim 2, wherein the barrier layer is selected from a metal layer, a semiconductor layer, a glass layer, a ceramic layer, a polymer layer and a composite material layer.

14. The organic electronic device structure of claim 2, wherein the barrier layer is a composite material layer that comprises (a) a polymer substrate sub-layer and (b) at least two alternating pairs of high-density sub-layers and planarizing sub-layers, which high-density sub-layers may be the same or different from each other and which planarizing sub-layers may be the same or different from each other.

15. The organic electronic device structure of claim 1, wherein said adhesive layer is a low-temperature-curable adhesive layer.

16. The organic electronic device structure of claim 1, wherein said adhesive layer is a radiation-curable adhesive layer.

17. The organic electronic device structure of claim 1, wherein said adhesive layer is an ultraviolet-radiation-curable adhesive layer.

18. The organic electronic device structure of claim 1, wherein said adhesive layer displays low out-gassing of harmful species.

19. The organic electronic device structure of claim 1, wherein said adhesive layer is in the form a continuous layer that is disposed over the entire organic electronic region.

20. The organic electronic device structure of claim 1, wherein said adhesive layer is in the form of a ring that is disposed over only a portion of the organic electronic region.

21. The organic electronic device structure of claim 1, further comprising a getter material.

22. The organic electronic device structure of claim 21, wherein the getter material is provided in said adhesive layer.

23. The organic electronic device structure of claim 1, wherein said substrate layer is selected from a metal layer, a semiconductor layer, a glass layer, a ceramic layer, a polymer layer and a composite material layer.

24. The organic electronic device structure of claim 1, wherein said substrate layer is a composite material layer that comprises (a) a polymer substrate sub-layer and (b) at